

CLAIMS

What is claimed is:

1. An energy evaluation support system for presenting an amount of energy consumed in a factory with a plurality of devices to a user, the devices including a plurality of production devices and a plurality of requisite-power supply devices which supplies a plurality of types of requisite power to the plurality of the production devices, the system comprising:

receiving means for receiving a design request of a factory including a production condition instruction indicating a production condition decided by the user;

storage means for storing a production device database containing data relating to the plurality of the production devices and a requisite-power supply device database containing data relating to the plurality of the requisite-power supply devices;

processing means for computing an amount of first energy consumption for each of the plurality of the production devices and the plurality of the requisite-power supply devices and for each type of the requisite power, based on the production device database and the requisite-power supply device database according to the design request; and

output means for presenting the amount of the first energy consumption computed by the processing means to the user in a predetermined form,

wherein the processing means:

selects production devices to be used among the plurality of the production devices according to the production condition instruction, and computes an amount of the requisite power required by the production devices

to be used for each type of the requisite power;

selects requisite-power supply devices to be used among the plurality of the requisite-power supply devices, based on the amount of the requisite power for each type of the requisite power, and computes an amount of second energy consumption required by the requisite-power supply devices to be used for each type of the requisite power; and

computes a coefficient of energy consumption indicating an amount of third energy consumption per predetermined unit of the requisite power supplied by the requisite-power supply devices to be used, based on the amount of the second energy consumption for each type of the requisite power, and computes the amount of the first energy consumption based on the coefficient of energy consumption.

2. The energy evaluation support system as defined in claim 1, wherein the processing means determines whether or not any one of the production devices to be used and the requisite-power supply devices to be used has an amount of energy consumption per device equal to or greater than a predetermined reference value, and selects at least one of the plurality of the production devices and the plurality of the requisite-power supply devices having an amount of the energy consumption per device less than the predetermined reference value, in a case where any one of the production devices to be used and the requisite-power supply devices to be used has an amount of the energy consumption per device equal to or greater than the predetermined reference value.

3. The energy evaluation support system as defined in claim 1, wherein the design request includes an operation season instruction

indicating an operation season of the factory, and

wherein the processing means corrects the amount of the first energy consumption according to the operation season instruction.

4. The energy evaluation support system as defined in claim 1,

wherein the design request includes a count unit instruction indicating a count unit according to a scale of production steps and an output form instruction indicating an output form,

wherein the processing means computes the amount of the first energy consumption by the count unit according to the count unit instruction, and

wherein the output means outputs the amount of the first energy consumption in the output form according to the output form instruction.

5. The energy evaluation support system as defined in claim 1,

wherein each of the first, second, and third energy consumption and the energy consumption per device is electric power consumption, and

wherein the processing means computes the total amount of the electric power consumption by adding an amount of electric power consumption in the production devices to be used and an amount of electric power consumption in the requisite-power supply devices to be used.

6. An energy evaluation support system for presenting an amount

of energy consumed in a factory with a plurality of devices to a user, the devices including a plurality of production devices and a plurality of requisite-power supply devices which supplies a plurality of types of requisite power to the plurality of the production devices, the system comprising:

a receiving section which receives a design request of a factory including

a production condition instruction indicating a production condition decided by the user;

a storage section which stores a production device database containing data relating to the plurality of the production devices and a requisite-power supply device database containing data relating to the plurality of the requisite-power supply devices;

a processing section which computes an amount of first energy consumption for each of the plurality of the production devices and the plurality of the requisite-power supply devices and for each type of the requisite power, based on the production device database and the requisite-power supply device database according to the design request; and

an output section which presents the amount of the first energy consumption computed by the processing section to the user in a predetermined form,

wherein the processing section:

selects production devices to be used among the plurality of the production devices according to the production condition instruction, and computes an amount of the requisite power required by the production devices to be used for each type of the requisite power;

selects requisite-power supply devices to be used among the plurality of the requisite-power supply devices, based on the amount of the requisite power for each type of the requisite power, and computes an amount of second energy consumption required by the requisite-power supply devices to be used for each type of the requisite power; and

computes a coefficient of energy consumption indicating an amount of third energy consumption per predetermined unit of the requisite power supplied by the requisite-power supply devices to be used, based on the amount of the

second energy consumption for each type of the requisite power, and computes the amount of the first energy consumption based on the coefficient of energy consumption.

7. A computer-readable program for causing a computer to function as an energy evaluation support system for presenting an amount of energy consumed in a factory with a plurality of devices to a user, the devices including a plurality of production devices and a plurality of requisite-power supply devices which supplies a plurality of types of requisite power to the plurality of the production devices, the program causing the computer to function as:

receiving means for receiving a design request of a factory including a production condition instruction indicating a production condition decided by the user;

storage means for storing a production device database containing data relating to the plurality of the production devices and a requisite-power supply device database containing data relating to the plurality of the requisite-power supply devices;

processing means for computing an amount of first energy consumption for each of the plurality of the production devices and the plurality of the requisite-power supply devices and for each type of the requisite power, based on the production device database and the requisite-power supply device database according to the design request; and

output means for presenting the amount of the first energy consumption computed by the processing means to the user in a predetermined form,

wherein the processing means:

selects production devices to be used among the plurality of the production devices according to the production condition instruction, and

computes an amount of the requisite power required by the production devices to be used for each type of the requisite power;

selects requisite-power supply devices to be used among the plurality of the requisite-power supply devices, based on the amount of the requisite power for each type of the requisite power, and computes an amount of second energy consumption required by the requisite-power supply devices to be used for each type of the requisite power; and

computes a coefficient of energy consumption indicating an amount of third energy consumption per predetermined unit of the requisite power supplied by the requisite-power supply devices to be used, based on the amount of the second energy consumption for each type of the requisite power, and computes the amount of the first energy consumption based on the coefficient of energy consumption.

8. An information storage medium storing a computer-readable program for causing a computer to function as an energy evaluation support system for presenting an amount of energy consumed in a factory with a plurality of devices to a user, the devices including a plurality of production devices and a plurality of requisite-power supply devices which supplies a plurality of types of requisite power to the plurality of the production devices, the program causing the computer to function as:

receiving means for receiving a design request of a factory including a production condition instruction indicating a production condition decided by the user;

storage means for storing a production device database containing data relating to the plurality of the production devices and a requisite-power supply device database containing data relating to the plurality of the requisite-power

supply devices;

processing means for computing an amount of first energy consumption for each of the plurality of the production devices and the plurality of the requisite-power supply devices and for each type of the requisite power, based on the production device database and the requisite-power supply device database according to the design request; and

output means for presenting the amount of the first energy consumption computed by the processing means to the user in a predetermined form,

wherein the processing means:

selects production devices to be used among the plurality of the production devices according to the production condition instruction, and computes an amount of the requisite power required by the production devices to be used for each type of the requisite power;

selects requisite-power supply devices to be used among the plurality of the requisite-power supply devices, based on the amount of the requisite power for each type of the requisite power, and computes an amount of second energy consumption required by the requisite-power supply devices to be used for each type of the requisite power; and

computes a coefficient of energy consumption indicating an amount of third energy consumption per predetermined unit of the requisite power supplied by the requisite-power supply devices to be used, based on the amount of the second energy consumption for each type of the requisite power, and computes the amount of the first energy consumption based on the coefficient of energy consumption.

9. An energy evaluation support method for presenting an amount of energy consumed in a factory with a plurality of devices to a user, the devices

including a plurality of production devices and a plurality of requisite-power supply devices which supplies a plurality of types of requisite power to the plurality of the production devices, the method comprising:

- storing a production device database containing data relating to the plurality of the production devices and a requisite-power supply device database containing data relating to the plurality of the requisite-power supply devices;

- receiving a design request including a production condition instruction indicating a production condition decided by the user;

- selecting production devices to be used among the plurality of the production devices according to the production condition instruction, based on the production device database;

- computing an amount of the requisite power required by the production devices to be used for each type of the requisite power;

- selecting requisite-power supply devices to be used among the plurality of the requisite-power supply devices, based on the requisite-power supply device database and the amount of the requisite power for each type of the requisite power;

- computing an amount of second energy consumption required by the requisite-power supply devices to be used for each type of the requisite power;

- computing a coefficient of energy consumption indicating an amount of third energy consumption per predetermined unit of the requisite power supplied by the requisite-power supply devices to be used, based on the amount of the second energy consumption for each type of the requisite power;

- computing an amount of first energy consumption based on the coefficient of energy consumption; and

- outputting the amount of the first energy consumption in a predetermined form.